

## REMARKS

Claims 1 through 17 continue to be in the case.

Claims 1, 7 and 15 are being amended.

New claims 18 through 20 are being added.

Applicant's attorney thanks the Examiner David B. Jones for the personal interview kindly granted on November 1, 2001. The undersigned very much appreciates the courtesies exchanged during the interview. During the interview the claims of the applicant were compared to the teaching of the references applied in the Office Action. The Examiner kindly suggested to define a die and the different parts of the die and then the motion performed by the parts of the die. Also the regions and segments should be defined for example as upper, lower, etc.

3. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U. S.

practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. All the claims contain error but for example in claim 1: terms such as "engraving", "sealing for fluid pressure", "pressure agent", and "bulging out and undercut hollow body" are indefinite and non-idiomatic limitations.

The language of the Claims has been further amended to avoid the questions raised in the Office Action.

4. Claims 1, 2, 4-17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Yasui '406.

Applicant respectfully disagrees.

Yasui uses the forming die (122 of Yasui) as a single item, as clearly seen from Figs. 2, 5, 6 of Yasui. In contrast to Yasui, the present application (please see claims 1 amended, 7 amended, 15, 17, 18) uses the apparatus (die) subdivided in different tool regions (E1, E2, E3, E4) corresponding to

the workpiece form, wherein the tool regions are disposed in different planes, and, moreover, at least one tool region is subdivided in several segments (S, S1, S2, S3, S4) according to the shape of the workpiece.

Also the present application (claims 1 as amended, 7 as amended, 9-11, 15, 17, 18) requires, in contrast to Yasui, that the segments allows relative motion toward each other during the pressing process, and the segments are movable away from hollow body (W) for removal of the hollow body from the mold.

Yasui uses a special seal ring 50 placed between the two sheets 46 and 48 (column 3, lines 25-26). In contrast to Yasui, the present application (claims 1, 2, 4, 5, 7, 8, 11- 14, 16-18) renders a special seal ring unnecessary, and the first and the second workpieces (1,2) have flanges 1.1 and, respectively, 1.2 and the first and the second workpieces are pressing sealingly together (1,2) in the region of the flanges 1.1 and 1.2.

The present application (claim 2) provides the third workpiece part adjoining the first flange region into a deformation tool, and Yasui teach nothing about the third workpiece part.

In addition, the teaching of the Yasui reference method is suitable for forming simple moldings, while the present application method can be used for producing much more complicated objects.

The difference between the requirements of applicant's claims and the Yasui are clearly patentable and the Yasui reference does not anticipate or render obvious the claims of the present application.

5. Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by DE 19651658 or DE 19719426.

Applicant respectfully disagrees.

DE 19651658 uses that the workpieces 1 and 2 (Figs.3, 4 of DE 19651658) are not disconnecting after pressure gas filling and workpiece pressing, but the workpieces 1 and 2 are welding with plasma laser 11 in the region of the flanges 3 after forming, making a single part (item), an the gas under pressure remains within the cavity 10 between the workpieces 1 and 2 welded.

The present application (Claim 1 of the present application as amended), in contrast to DE 19651658, requires "moving the first tool region away from the deformed first workpiece and the deformed second workpiece;

moving the first segment away from the deformed first workpiece, the deformed second workpiece and the second segment in a direction different from the direction of pressing of the first sealing face against the second sealing face".

The present application teaches about the composite forming dies and about the means for the flange pressing. In contrast to the present

application, DE 19651658, like above the Yasui reference, teaches about forming dies only as about single item, and DE 19651658 does not teach anything about the means for the flange pressing. DE 19651658 reference only marks the direction of the pressing forces with arrows labeled "FN".

The present application (claims 1 amended, 7 amended, 9-11, 15, 17, 18) requires "means for moving the tool regions and the segments away from a hollow body formed of the first workpiece part and of the second workpiece part for a removal of the hollow body from the mold". In contrast to the present application, DE 19651658 reference does not teach anything about such means.

DE 19719426, like above Yasui reference, also teaches about forming dies only as a single forming item and DE 19719426 does not suggest composite forming dies, in clear contrast to the requirements of the claims of the present application (claims 1 amended, 7 amended, 15, 17, 18).

The construction of the DE 19719426 reference allows to produce only simple details with small deformations during the forming process, as clearly seen in Fig.1 of the DE 19719426. In contrast to the DE 19719426, the present application provides bulging out undercut hollow bodies with large deformations.

6. Claims 1, 3-17 stand rejected under 35 U. S. C. 102(b) as being anticipated by DE 19732413, Fig. 4.

Applicant respectfully disagrees.

The claims of the present application (claims 1 amended, 7 amended, 18, Figs.3, 4, 6) require the tool regions disposed in different planes and subdivided into several segments (the third tool region is subdivided into first segment and second segment). These segments in the present application are facing each other perpendicular to the pressing direction, and these segments are moving away from the deformed first workpiece and the

deformed second workpiece in a direction different from the direction of pressing of the first sealing face against the second sealing face.

In contrast to the claims of the present application, the reference DE 19732413 uses single-item tool regions (4, 14 in Fig.4 of DE 19732413) without further subdivision into rings which are stacked in the pressing direction and form more or less cylindrical bodies. Details 2, 3 and 3.1 of DE 19732413 do not have segments of the tool region. These rings of the reference do not face each other perpendicular to the pressing direction as required in applicant's claims for the segments of the present application. The details (Details 2, 3 and 3.1 of DE 19732413) of the reference are used for a first and main stage of the forming (please see Figs.1a, 1b, 2 and 3 of DE 19732413) with the pressing mechanical piston force labeled "Fst". Therefore, workpiece forming according to the DE 19732413 reference is performed by a piston force, where pressing fluid is working only in the last stage for small forming (please compare Figs. 1a, 1b, 2, 3 and 4 of DE 19732413).



Therefore, the DE reference 19732413 construction does not provide any tool regions subdivided into segments, as the claims of the present application require. In conclusion, the DE 19732413 reference does not anticipate or render obvious the claims of the present application.

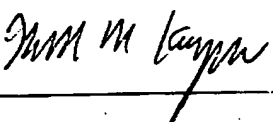
Applicant submits that the prior art made of record neither anticipates nor renders obvious the present invention.

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

Bernd Schulze

By: 

Horst M. Kasper, his attorney  
13 Forest Drive, Warren, N.J. 07059  
Tel. (908)757-2839; Reg.No. 28559  
Attorney's Docket No.: RUM213

\*%(S(RUM213A2(December 6, 2001(rep-